

AMENDMENTS TO THE CLAIMS

Claims 1-6: (canceled).

Claim 7 (currently amended): A method for forming a miniarray on a miniarray substrate, said miniarray comprising locations or spots that contain an analyte specific reagent for detecting an analyte in a sample, said method comprises the steps of:

(a) aspirating a solution of each analyte specific reagent into dispensers comprising pipette tips spaced 9 mm or 4.5 mm center to center to load multiple reagent samples and, said dispensers connected to a syringe pump;

(b) pressuring nanoliter quantities of defined droplets of said analyte specific reagent from the pipette tips of said ~~pipette-based~~ dispensers that has been loaded with microliter quantities of said analyte specific reagent;

(c) touching said droplets to said miniarray substrate and causing said droplets to release through gravity which is performed by applying an electromechanical force to the tips of said dispensers, thereby spotting specific locations or spots on said substrate with a specific volume of said analyte specific reagent, wherein said locations or spots have a center-to-center spacing of in the range of 1 mm to 3 mm; and

(d) repeating steps (a) to (c) until said miniarray is fabricated.

Claim 8: (canceled).

Claim 9 (previously presented): The method of claim 7, wherein said dispensers are arranged in one or two rows.

Claim 10: (canceled)

Claim 11 (previously presented): The method of claim 7, wherein said dispensers have disposable tips that can be ejected and replaced automatically or fixed tips that are cleaned and dried between sample loadings.

Claim 12 (previously presented): The method of claim 7, wherein causing said droplet to release through gravity is performed by increasing pressure on said defined droplet to eject sufficient volume from the tips of said dispensers to cause said droplet to release by gravity.

Claim 13 (previously presented): The method of claim 7, wherein causing said droplet to release through gravity is performed by applying an electromechanical force to the tips of said dispensers to cause said droplet to release by gravity, wherein said electromechanical force is selected from the group consisting of vibration, piezoelectric pressure, and rapid mechanical actuation.

Claim 14 (previously presented): The method of claim 7, wherein said dispensers are carried by a robotically controlled apparatus that provides lateral and vertical motions, thereby automating the loading of multiple reagent

samples, the replacement or cleaning of the pipette tips, and the spotting of multiple miniarrays under programmed instructions.

Claim 15 (original): The method of claim 7, wherein said miniarray achieves a smaller, more condensed distribution by interspersing successive dispensing of reagents onto the array in regions between the spots dispensed previously.

Claim 16: (canceled)

Claim 17 (currently amended): The method of claim 7, wherein said dispensers are stationary, except for vertical motion, and miniarray substrates and reagent samples are moved under said dispensers by a robotic apparatus that moves under programmed instructions.

Claim 18. (original) The method of claim 7, wherein said miniarray substrate is selected from the group consisting of coated microscope slides, flexible membranes, rigid glass, plastics, semi-rigid film, paper-based printing substrates, semi-rigid printing materials, photographic paper and high quality computer printing papers.

Claims 19-54: (canceled).